

EXHIBIT 3

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Attorneys for Plaintiff
JOHNSTECH INTERNATIONAL CORP.

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION

JOHNSTECH INTERNATIONAL CORP.,

Plaintiff,

vs.

JF MICROTECHNOLOGY SDN BHD,

Defendant.

Case No. 3:14-cv-02864-JD

**DECLARATION OF
MICHAEL ANDRES**

I, Michael Andres, declare as follows:

1. I am providing this declaration in order to disclose the testimony I may provide if called as a witness in the trial of this case.

2. I am employed by Johnstech International Corp. ("Johnstech") as an engineering manager. I have worked for Johnstech for over 21 years in various roles associated with designing, troubleshooting and manufacturing of contactors for testing integrated circuits, as well as supervising other employees performing those activities. Prior to my employment at

1 Johnstech, I worked at Micro Component Technology for two years as an associate mechanical
2 engineer responsible for designing contactors and handler components. I have a Bachelor of
3 Science degree in mechanical engineering from the University of Minnesota.

4 3. I have reviewed and analyzed U.S. Patent number 7,059,866 (referred to as “the
5 ’866 patent”). I reviewed and analyzed JF Microtechnology’s patent (U.S. Patent No. 8,952,714).
6 I have also reviewed various marketing materials (Dkt. # 40-1, Exs. 1-4) and data sheets
7 (JOHNSTECH07883-7884) describing JF Microtechnology’s Zigma product. I have also
8 reviewed a sample contactor from JF Microtechnology, and compared that product with
9 Johnstech ROL™ and 2MM contactors. I have also analyzed Dr. Stuart Brown’s independent
10 testing results.

11 4. I understand that Johnstech alleges that JF Microtechnology’s Zigma product
12 infringes the ’866 patent. I am not an attorney, nor am I an expert regarding United States patent
13 law. However, I have been informed of some of the legal principles that I understand guide
14 analysis of the patent infringement allegations in this case. I also have some understanding of
15 United States patent law from my work at Johnstech and from my professional experience as a
16 mechanical engineer. I understand that the ’866 patent has claims (claims 1-4) that define the
17 scope of the invention, and I understand that each claim includes a number of elements or
18 limitations. I also understand that to be infringed, all limitations of a patent claim must be present
19 in an accused product. I understand that to determine whether a claim is infringed, a person must
20 compare each limitation of a properly construed claim with the corresponding elements in the
21 allegedly infringing product. If each and every limitation of a claim is found in an allegedly
22 infringing product, I understand that the patent claim is infringed.

23 5. Independent claim 1 of the ’866 patent describes an “apparatus for electrically
24 connecting a lead of the integrated circuit to be tested to a corresponding terminal of a load board
25 at a test site, comprising: ...” JF Microtechnology advertisements and literature available in
26 magazine and online form state that the Zigma product is used for the sole purpose of electrically
27 connecting a lead of an integrated circuit (referred to as DUT for Device Under Test) to a
28 terminal of a load board in order to test the integrated circuit. See Johnstech’s Disclosure of

1 Asserted Claims and Infringement Contentions, Attachment A (referred to as “Attachment A”).
2 For convenience, I will refer to the page numbers of the complete Disclosure of Asserted Claims
3 and Infringement Contentions document rather than numbering starting from the beginning of the
4 Attachment. According to my review of the Zigma materials from JF Microtechnology, and from
5 my own industry knowledge, the above-quoted claim limitation from patent ‘866 is present in the
6 Zigma product because Zigma is an “apparatus for electrically connecting a lead of the integrated
7 circuit to be tested to a corresponding terminal of a load board at a test site.” See page 8 of
8 Attachment A.

9 6. The ‘866 patent also claims “a housing having oppositely facing surfaces, a first
10 approachable by an integrated circuit to be tested and a second proximate the load board, a slot
11 extend through said housing from a first of said oppositely facing surfaces to a second of said
12 oppositely facing surfaces; ...” See ‘866 patent, claim 1. The CAD image contained within the
13 JF Microtechnology marketing materials shows that all of the elements of this claim limitation are
14 present in the Zigma product. See Attachment A. The Zigma data sheets and sample clearly
15 show that the Zigma contactor has a housing with opposite facing surfaces, with one surface of
16 receiving an integrated circuit to be tested and a second surface to be connected to the load board
17 of a test terminal.

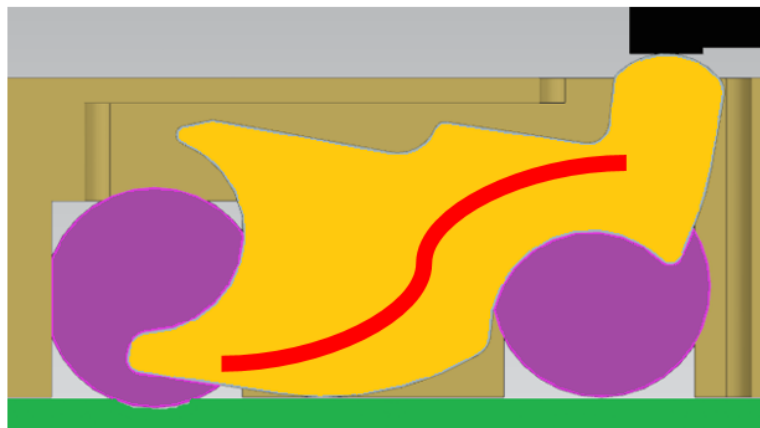
18 7. The ‘866 patent claims “a contact receivable in said slot having a first end
19 engagable by the lead and a second end in engagement with the terminal, said contact being
20 rollable across the terminal between a first orientation unengaged by the lead of the integrated
21 circuit and a second orientation in which said first end of said contact is engaged by the lead of
22 the integrated circuit and urged into said slot; ...” See ‘866 patent, claim 1. The JF
23 Microtechnology CAD images show that the Zigma product exhibits all the characteristics listed
24 in the claim quoted above from the ‘866 patent. See Attachment A page 9 (bottom row) and page
25 10 (top row). The Zigma product sample and data sheets show that the Zigma contactor contains
26 multiple “contacts” extending from slots within the housing. One end of each contact is
27 engagable by the lead of an integrated circuit to be tested. A second end of each contact is
28 engaged by the terminal of the load board. From my examination of the Zigma sample and

1 review of the related materials, when an integrated circuit is inserted into the Zigma contactor and
2 engages the first end of the contacts, the contacts roll across the surface of the load board moving
3 a from an unengaged-first position to an engaged-second position.

4 8. The '866 patent also requires "means for biasing said contact to said first
5 orientation, wherein, as said contact is rolled between said first and said second orientations
6 thereof, sliding motion of said second end of said contact across the terminal is substantially
7 eliminated." See '866 patent, claim 1. The "means for biasing" the contact to a first (unengaged)
8 orientation described in the '866 patent are one or more cylindrical elastomers. See '866 patent,
9 2:65-67, 4:17-20. The contacts within the Zigma product are similarly held in place by two
10 cylindrical elastomers. The elastomers bias the contacts to an unengaged-first orientation. See
11 Attachment A pages 10, 11, 12 and top of page 13. I have reviewed the analysis of the motion
12 characteristics of JF Microtechnology's Zigma contactor, Johnstech ROL™200, and the prior art
13 (Johnstech 2MM) performed by Dr. Stuart Brown. Dr. Brown measured and calculated using
14 MicroCT Scans the actual sliding motion of sample assemblies representing the three above-
15 mentioned technologies. The sliding can be separated into two components for analysis: (1) the
16 movement of the contact either forward (toward the center of the DUT) or backward away from
17 the DUT; and (2) the rotational movement of the contact radius that is actually in contact with the
18 load board. If the contact is suspended symmetrically by the elastomers, the natural motion of the
19 load board tip of the contact will be away from the DUT. This movement away from the DUT
20 plus the movement caused by rotation of the contact are in the same direction and so they add
21 together in examples of prior art. This is true of the Johnstech original 2MM "S" contact, which
22 was found in Dr. Brown's analysis to slide on the load board pad 0.270 mm. The original
23 ROL™200 contactor invented and constructed by Johnstech slides 0.055 mm, because the
24 interactions of the elastomers, contact and housing cause the contact to roll forward during
25 actuation. The JF Zigma contact slides 0.095 mm, an amount that is significantly reduced
26 because the geometry of the contact, elastomers and housing combine to force the contact to roll
27 forward while being actuated. The arc length of the radial surface of the Zigma contact that must
28 touch the load board during actuation is 0.184 mm (this information is calculated in the following

manner – Length = (rotation degrees)/360 degrees x 2 x π x Contact Radius). The contact radius was determined through inspection of sample Zigma contacts from JF Microtechnology. The rotation degrees were determined through CAD analysis and materials from JF Microtechnology stating that the uncompressed and compressed heights of the Zigma contact are 1.40mm and 1.20mm, respectively. The rotation measured by Dr. Brown through MicroCT scans was 7 degrees, which corresponds to a 0.150mm arc length. The natural movement of the Zigma contact if it were designed only to touch both the load board terminal and the DUT and to actuate rather than to also substantially eliminate sliding would be greater than 0.184 mm (CAD) or 0.150mm (measured). Therefore, the Zigma contact and housing design substantially eliminates sliding.

9. Dependent claim 2 of the '866 patent requires an "Apparatus in accordance with claim 1 wherein said contact is generally S-shaped." See '866 patent, claim 2. The JF Zigma contact is generally S-shaped just as the Johnstech ROL™ is. A CAD image of the Zigma contact in its compressed position is shown below for illustration. Therefore, the Zigma contact satisfies the "generally S-shaped" requirement of claim 2. See Attachment A page 13 bottom row and page 14.



10. Dependent claim 3 of the '866 patent requires an "Apparatus in accordance with claim 2 wherein said means for biasing comprises a first elastomer interfacing with said first end of said contact and a second elastomer interfacing with said second end of said contact." See '866 patent, claim 3. The CAD images, sample, data sheets, and other related materials show that

1 the Zigma product uses front and rear elastomers to bias the contacts within to a first orientation,
2 unengaged by an integrated circuit to be tested. See Attachment A page 15 and top row of page
3 16 and the image above in this document.

4 11. Dependent claim 4 of the '866 patent requires an "Apparatus in accordance with
5 claim 3 wherein said second end of said contact includes a protrusion, and wherein said housing
6 defines a wall engaged by said protrusion to substantially eliminate sliding motion of said second
7 end of said contact across the terminal." The JF Zigma contact design includes a protrusion, and
8 that protrusion engages the housing wall through the elastomer. See Attachment A page 16
9 bottom row as well as pages 17, 18, 19 and 20. The JF Zigma design includes an elastomer that is
10 relatively large and high durometer (stiffness), which minimizes the elastomer deflection and
11 maximizes the engagement of the contact protrusion with the housing wall.

12 12. There are significant changes to the contact and housing design when compared to
13 the prior art that result in the substantial elimination of sliding. In my opinion, there had to be
14 deliberate design efforts to product this effect in the JF Zigma contact motion. These efforts
15 result in a product that infringes claims 1-4 of the '866 patent.

16 13. I reserve the right to amend the opinions provided in this declaration or provide
17 additional opinions on any claim of the '866 patent based on further analysis or additional
18 information that becomes available to me.

19 14. If called to testify, I may use as exhibits the Attachment A and the documents
20 referred to within, documents related to Zigma produced in discovery by JF Microtechnology,
21 samples of the Zigma product and Johnstech's ROL™200 and prior art 2MM products, Johnstech
22 documents produced in discovery in this case, and any of the exhibits admitted at trial or used as
23 exhibits during depositions taken in this case.

24 15. The facts set forth in this declaration are true and correct to the best of my
25 knowledge. My conclusions concerning infringement of the '866 patent are held to a reasonable
26 degree of certainty.

27 16. I am not being compensated for study and testimony, other than the ordinary
28 compensation that I receive from my employment at Johnstech.

Executed on December 2, 2015 at Minneapolis, Minnesota.

Michael Andres